

# SEQUENCE LISTING

<110> Manners, John M.  
 Marcus, John Paul  
 Goulter, Kenneth C.  
 Green, Jodie Lyn  
 Harrison, Stuart John

<120> ANTI-MICROBIAL PROTEIN

<130> CULLN18.1CP1C1

<150> 09/364395

<151> 1999-07-30

<150> 09/117615

<151> 1998-11-09

<150> PCT/AU97/00052

<151> 1997-01-31

<150> AU PN 7802

<151> 1996-01-31

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 102

<212> PRT

<213> Macadamia integrifolia

<400> 1

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Ile	Ala	Met	Ala	Ser	Glu	Met	Val	Asn	Gly	Ser	Ala	Phe	Thr	Val	Trp
		20						25				30			
Ser	Gly	Pro	Gly	Cys	Asn	Asn	Arg	Ala	Glu	Arg	Tyr	Ser	Lys	Cys	Gly
		35					40					45			
Cys	Ser	Ala	Ile	His	Gln	Lys	Gly	Gly	Tyr	Asp	Phe	Ser	Tyr	Thr	Gly
	50					55				60					
Gln	Thr	Ala	Ala	Leu	Tyr	Asn	Gln	Ala	Gly	Cys	Ser	Gly	Val	Ala	His
65					70				75						80
Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys	Asn	Pro	Phe	Gly	Trp	Lys
				85					90					95	
Ser	Ile	Phe	Ile	Gln	Cys										
				100											

<210> 2

<211> 493

<212> DNA

<213> Macadamia integrifolia

<220>

<221> CDS



<210> 5  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> 3' RACE primer alpha.

<400> 5  
 tgctctctac aaccaggctg 20

<210> 6  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> 5' RACE primer beta.

<400> 6  
 gcattggatg aagatactc 19

<210> 7  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> 5' RACE primer to anneal with poly-C-tailed cDNA  
 primer alpha.

<221> misc\_feature  
 <222> (0)...(0)  
 <223> n = inosine

<400> 7  
 ggccacgcgt cgactagtagtac gggnnngggnn gggnnng 36

<210> 8  
 <211> 20  
 <212> DNA  
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<220>  
 <223> Mi28K primer. Mismatched oligonucleotide  
 containing a mutation of the MiAMP1 coding  
 sequence from amino acid Q(position 28) to K.

<400> 8  
 gctatacata aaaagggagg 20

<210> 9  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence



acaccatattg agtgcattta cagtattgagt g

31

<210> 14

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer from the 3' coding region of MiAMP1 (Mi2 primer).

<400> 14

gaagagtatc ttcattcaat gctaaggatc cacac

35

<210> 15

<211> 76

<212> PRT

<213> Artificial Sequence

<220>

<223> Mi28K variant. Variant MiAMP1 protein Mi28K containing a Lysine at amino acid 28 (used primer from SEQ ID NO:8 to produce).

<400> 15

Ser	Ala	Phe	Thr	Val	Trp	Ser	Gly	Pro	Gly	Cys	Asn	Asn	Arg	Ala	Glu
1				5					10					15	
Arg	Tyr	Ser	Lys	Cys	Gly	Cys	Ser	Ala	Ile	His	Lys	Lys	Gly	Gly	Tyr
			20					25					30		
Asp	Phe	Ser	Tyr	Thr	Gly	Gln	Thr	Ala	Ala	Leu	Tyr	Asn	Gln	Ala	Gly
			35				40					45			
Cys	Ser	Gly	Val	Ala	His	Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys
			50			55					60				
Asn	Pro	Phe	Gly	Trp	Lys	Ser	Ile	Phe	Ile	Gln	Cys				
65					70					75					

<210> 16

<211> 76

<212> PRT

<213> Artificial Sequence

<220>

<223> Mi39K variant. Variant MiAMP1 protein Mi39K containing a Lysine at amino acid 39 (used primer from SEQ ID NO:9 to produce).

<400> 16

Ser	Ala	Phe	Thr	Val	Trp	Ser	Gly	Pro	Gly	Cys	Asn	Asn	Arg	Ala	Glu
1				5					10					15	
Arg	Tyr	Ser	Lys	Cys	Gly	Cys	Ser	Ala	Ile	His	Gln	Lys	Gly	Gly	Tyr
			20					25					30		
Asp	Phe	Ser	Tyr	Thr	Gly	Lys	Thr	Ala	Ala	Leu	Tyr	Asn	Gln	Ala	Gly
			35				40					45			
Cys	Ser	Gly	Val	Ala	His	Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys
			50			55					60				
Asn	Pro	Phe	Gly	Trp	Lys	Ser	Ile	Phe	Ile	Gln	Cys				
65					70					75					

<210> 17  
<211> 76  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Mi46K variant. Variant MiAMP1 protein Mi46K  
containing a Lysine at amino acid 46 (used primer  
from SEQ ID NO:10 to produce).

<400> 17

Ser	Ala	Phe	Thr	Val	Trp	Ser	Gly	Pro	Gly	Cys	Asn	Asn	Arg	Ala	Glu
1				5				10						15	
Arg	Tyr	Ser	Lys	Cys	Gly	Cys	Ser	Ala	Ile	His	Gln	Lys	Gly	Gly	Tyr
			20					25					30		
Asp	Phe	Ser	Tyr	Thr	Gly	Gln	Thr	Ala	Ala	Leu	Tyr	Asn	Lys	Ala	Gly
			35				40					45			
Cys	Ser	Gly	Val	Ala	His	Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys
	50					55					60				
Asn	Pro	Phe	Gly	Trp	Lys	Ser	Ile	Phe	Ile	Gln	Cys				
65					70					75					

<210> 18  
<211> 76  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Mi54V variant. Variant MiAMP1 protein Mi54V  
containing a Valine at amino acid 54 (used primer  
from SEQ ID NO:11 to produce).

<400> 18

Ser	Ala	Phe	Thr	Val	Trp	Ser	Gly	Pro	Gly	Cys	Asn	Asn	Arg	Ala	Glu
1				5				10						15	
Arg	Tyr	Ser	Lys	Cys	Gly	Cys	Ser	Ala	Ile	His	Gln	Lys	Gly	Gly	Tyr
			20					25					30		
Asp	Phe	Ser	Tyr	Thr	Gly	Gln	Thr	Ala	Ala	Leu	Tyr	Asn	Gln	Ala	Gly
			35				40					45			
Cys	Ser	Gly	Val	Ala	Val	Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys
	50					55					60				
Asn	Pro	Phe	Gly	Trp	Lys	Ser	Ile	Phe	Ile	Gln	Cys				
65					70					75					

<210> 19  
<211> 76  
<212> PRT  
<213> Artificial Sequence

<220>

<223> Mi54K variant. Variant MiAMP1 protein Mi54K  
containing a Lysine at amino acid 54 (used primer  
from SEQ ID NO:12 to produce).

<400> 19

Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu

1		5		10		15									
Arg	Tyr	Ser	Lys	Cys	Gly	Cys	Ser	Ala	Ile	His	Gln	Lys	Gly	Gly	Tyr
		20					25					30			
Asp	Phe	Ser	Tyr	Thr	Gly	Gln	Thr	Ala	Ala	Leu	Tyr	Asn	Gln	Ala	Gly
		35					40					45			
Cys	Ser	Gly	Val	Ala	Lys	Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys
	50					55					60				
Asn	Pro	Phe	Gly	Trp	Lys	Ser	Ile	Phe	Ile	Gln	Cys				
65					70					75					

<210> 20  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mi46K/54V variant. Variant MiAMP1 protein  
 Mi46K/54V containing a Lysine at amino acid 46 and  
 a Valine at amino acid 54.

<400> 20
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
1 5 10 15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
20 25 30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly
35 40 45
Cys Ser Gly Val Ala Val Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
50 55 60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
65 70 75

<210> 21  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mi46K/54K variant. Variant MiAMP1 protein  
 Mi46K/54K containing a Lysine at amino acid 46 and  
 a Lysine at amino acid 54.

<400> 21
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
1 5 10 15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
20 25 30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly
35 40 45
Cys Ser Gly Val Ala Lys Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
50 55 60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
65 70 75